



Historic Franklin Tennessee

Sustainability Matters to Franklin

City Highlights

- Located in Williamson County
- Population around 63,000 people in 2010 (2010 Census)
- 41 Square Miles
- Founded in 1799

Energy Upgrades

The City developed a baseline and completed an energy inventory of municipal electricity and fleet fuel usage in 2010 and began to track monthly energy usage using [Energy Star Portfolio Manager](#) (there is no cost to use this program). The City discovered that the wastewater treatment plant used about 45% of all municipal energy usage. The City's streetlights served as the second highest energy consumer and the combined electricity costs of running the plant and keeping the streetlights operating is about \$2 million annually. This is where the City focused their efforts.

Waste Water Treatment Upgrade

The City's Water Department was selected to participate in the Tennessee Water & Wastewater Utilities Partnership. The Water Department has significantly reduced energy usage and is experiencing savings of about \$10,000/month by:

- Shifting some non-critical day-time operations to late at night,
- Changing the Dissolved Oxygen (DO) set point from 2.0 to 1.0 mg/l,
- Removing one 350 horsepower aerator out of service; and
- Discontinuing use of a 300 horse power supplemental air blower.

The City also adjusted thermostats to use less energy, cut off unnecessary lights, and reduced the heater setting on the hot water heater in the administrative building.

The Water Department is also working with the TVA sponsored program offered by ENERNOC to reduce peak demand. The value to the City is expected to be about \$16,000/year.

Street Light Upgrade

Historic Downtown Franklin replaced sixteen (16) 175 watt metal halide street lights with sixteen (16) forty (40) watt LEDs in the fall of 2011. The LEDs are 75% more efficient.

Historic Downtown Franklin, spent \$2,952 on sixteen (16) LEDs and the TVA Energy Right Solutions Program provided a rebate of \$416. With the rebate, the anticipated Return on Investment (ROI) is 2.5 years on energy savings alone. This does not include the avoided replacement costs of the 175 watt metal halides nor the labor involved with replacing them every 12-18 months. The LED light we selected also comes with a five (5) year warranty and was installed by City staff from the Streets Department.

Note: If street lights are metered based upon energy usage, than converting to energy efficient bulbs is absolutely the way to go.



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Moving Forward

The City is looking at different options for retrofitting two downtown parking garages to induction or LED. They estimate annual savings to be at least \$5,000 per garage.

With already one 200 kW solar project completed vis-à-vis a public-private partnership, the City continues to examine options for additional projects.

City staff will continue to work with MTEMC and TVA to take advantage of existing programs and incentives to reduce power consumption.

The City's Sustainability Commission meets regularly and is in the process of updating the 2009 Sustainability Action Plan. This plan highlights other measures that the City can take to reduce their footprint in the State of Tennessee.

If you would like more information about other sustainable practices that the City is involved with please visit www.franklintn.gov.



This 200 kW ground mounted array at the wastewater plant was designed, financed, and funded by Energy Source Partners. The below photograph shows City staff installing LED streetlights.

